**Building Big**

***Part A: Forces***

***- go down the left hand margin of the purple box to answer the questions.***

 Compression (or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) is when an object \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a. When would you see this in real life? (give two examples...*you can find one of them at the bottom of the purple box where it says 'see it in real life'*)

1.

2.

 Tension (or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) is when an object \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a. When would you see this in real life? (give two examples)

1.

2.

 Bending is when an object \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a. When would you see this in real life? (give two examples)

1.

2.

 Shear (or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) is when an object \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a. When would you see this in real life? (give two examples)

1.

2.

 Torsion (or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) is when an object \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a. When would you see this in real life? (give two examples)

1.

2.

***Part B: Loads***

*1.* *What is a dead load?*

*2.* *What is a live load and provide an example?*

*3.* *How would you strengthen a beam in order to support a heavy LIVE load?*

*4.* *How would you strengthen a structure when it is on soft soil?*

*5.* *What is a thermal load?*

*6.* *How would you protect the structure against a thermal load?*

*7.* *What is the best way to protect a structure against an earthquake?*

*8.* *How would you protect against wind?*